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ABSTRACT

This report by a governor-appointed commission contains recommendations for designing a work-oriented education system intended to provide the skills Vermont citizens will need for the workplace by the year 2000. An executive summary describes the rationale for a work-oriented educational system; states the commission's mission; lists recommendations for kindergarten through 12th-grade education, vocational and technical education, and educational support services; and explains the philosophy reflected in the system's design. A graphic illustration of the recommended system is included. Among the recommendations for the K-12 component are elimination of the general track curriculum; assessment of mastery of essential skills; restructuring of schools to fit students' developmental stages; career exploration programs; and more involvement, incentives, and accountability for education professionals. Recommendations for vocational/technical education include flexible career plans; integration of basic skills and job-oriented training; responsiveness to private sector needs and economic development policies; open entry/exit; and testing, counseling, and planning. Recommended support services are for health, nutrition, substance abuse, family counseling, and an automated information and referral service. The document concludes with an appendix that describes how the commission accomplished its work, a bibliogrpahy containing 34 references, and an illustration of the entry points to the system. (CML)

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Target
2000

Report of the Getting Ready to Work Study Commission

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The
Getting Ready to Work
Study Commission
Montpelier, Vermont
1989

Target 2000

Executive Summary

The Problem

The Commission's recommendations follow directly from some basic realities:

Vermont's future workforce will require skills that too many of our high school graduates do not have.

That workforce will require skills that many already working do not have, either.

We can define the broad outlines of the economy of the year 2000. We can define the skills that the workforce will require. But changes made in the education system are not connected to any shared vision of Vermont's economic future.

Jobs will require continuous retraining, but our system is based largely on the idea that initial training is enough.

While we know what the new skills are we do not have a new model for how we will provide those skills. In the absence of such a model, we continue to make major investments in the old model of education and job training. We continue to send students through the old system. We need a strategy to guide long-term investment in job-related education, both prior to employment and for those already in the workforce.

General education, vocational education, apprenticeship, the transition from school to job, and the opportunity for retraining should be elements that work together to enable Vermonters to get and renew competitive job skills. In fact, they often do not work together well, and there are problems with each part of what could be an integrated system.

Technological illiteracy as well as functional illiteracy plague the U.S. workforce. In Vermont, we do not have the broad range of technical training resources to prepare people at the associate's degree level or to retrain people already in the workforce.

In-state institutions offer a wide range of programs, but students must leave the state to get training in certain fields.

Mission Statement

Design the academic, vocational, and technical training system needed to provide Vermonters with the skills they need for the workplace: a work-oriented education system. Identify the goals and duties of all the elements of such a system, including:

- The specific responsibilities of the K-through-12 component.
- The vocational/technical and training components needed in school years 11 through 14, and their working relationships.
- The role of the business community.

K Through 12

The aim is to enable all students to master the skills essential for further education and training or for successful entry into the workplace. The skills are:

Communication
Critical Thinking and Problem-Solving
Mathematics
Science and Technology
Economics and Citizenship
History and Culture
Personal and Career Development

Recommendations

Ensure that a Vermont diploma guarantees that the holder has certain minimum skills; that it indicates an actual level of achievement.

Eliminate the general track curriculum, so no student gets a diluted education.

Assess all students at the elementary, middle and high school levels for mastery of the essential skills.

Designate the K-12 component as responsible for all remedial education, making programs as individualized, fast-paced and short-term as possible.

Provide education and training all year in discrete blocks of two to three months.

Structure schools to fit the developmental stages of the students.

Establish career exploration programs to give students a realistic understanding of work generally and career possibilities in particular.

Ensure that students who choose to work immediately after graduation are prepared to move into the workplace.

Expand the involvement of education professionals in decisions affecting student achievement, provide them with incentives for success and require accountability for results.

Vocational/Technical Education

The aim is to deliver comprehensive, work-oriented technical education and training from grade 11 through the associate degree level, and to those already in the workforce.

Recommendations

Focus strongly on students and their real needs; provide each student with a flexible career plan based on routine consultation, testing and evaluation.

Provide service to all Vermonters who have mastered the essential skills.

Integrate essential skills education and job-oriented technical training to assure cost-effective use of resources.

Build in responsiveness to the requirements of the private sector and provide linkage with the state's economic development policy.

Invite strong involvement by business and members of the community, especially parents, in all phases of the system.

Provide open entry and exit, making it conven-

ient for clients to enter at several times during the academic year for short-duration retraining or upgrading of specific skills.

Emphasize flexible, customized, change-oriented programs and provide easy transition among the system components.

Emphasize cooperative arrangements among programs and institutions, including articulation agreements to accept one another's credits.

Establish a testing, counseling and planning component, consisting of "one-stop" offices statewide to furnish all evaluation and planning services as well as referrals for job training, retraining, support services and remediation.

Support Services

Provide health services, education in nutrition and substance abuse, family counseling and other kinds of support in or near schools for all students who need them.

Give schools access to an Automated Information and Referral Service, to alert them to private, as well as public, support service resources for children and families.

Designate the Agency of Human Services as responsible for coordinating and delivering non-education services.

Design Philosophy

The elements of a comprehensive, work-oriented education system are scattered throughout the public sector. The Commission believes their efforts must be integrated for the system to operate efficiently, economically and effectively. The components of the system are:

- High school career education programs
- The 16 area vocational/technical centers
- Vermont Department of Employment and Training education programs under the U.S. Job Training Partnership Act and other federal programs
- Vermont Department of Labor and Industry apprenticeship programs
- Vermont Department of Education adult training programs
- Vermont Agency of Development and Community Affairs training programs
- Vermont Student Assistance Corp. outreach programs
- Vermont Technical College and elements of Community College of Vermont
- Customized training programs for business and industry

The Commission envisions an integrated, work-oriented education system. The system must provide Vermonters access to education and training programs that prepare them for life-long learning as well as immediate employment. It must prepare both youth and adults for the necessity of frequent retraining. The system must be responsive to the needs of the business community through tailored training programs and must focus on core technical skills that are transferable to specific jobs.

WORK ORIENTED EDUCATION SYSTEM

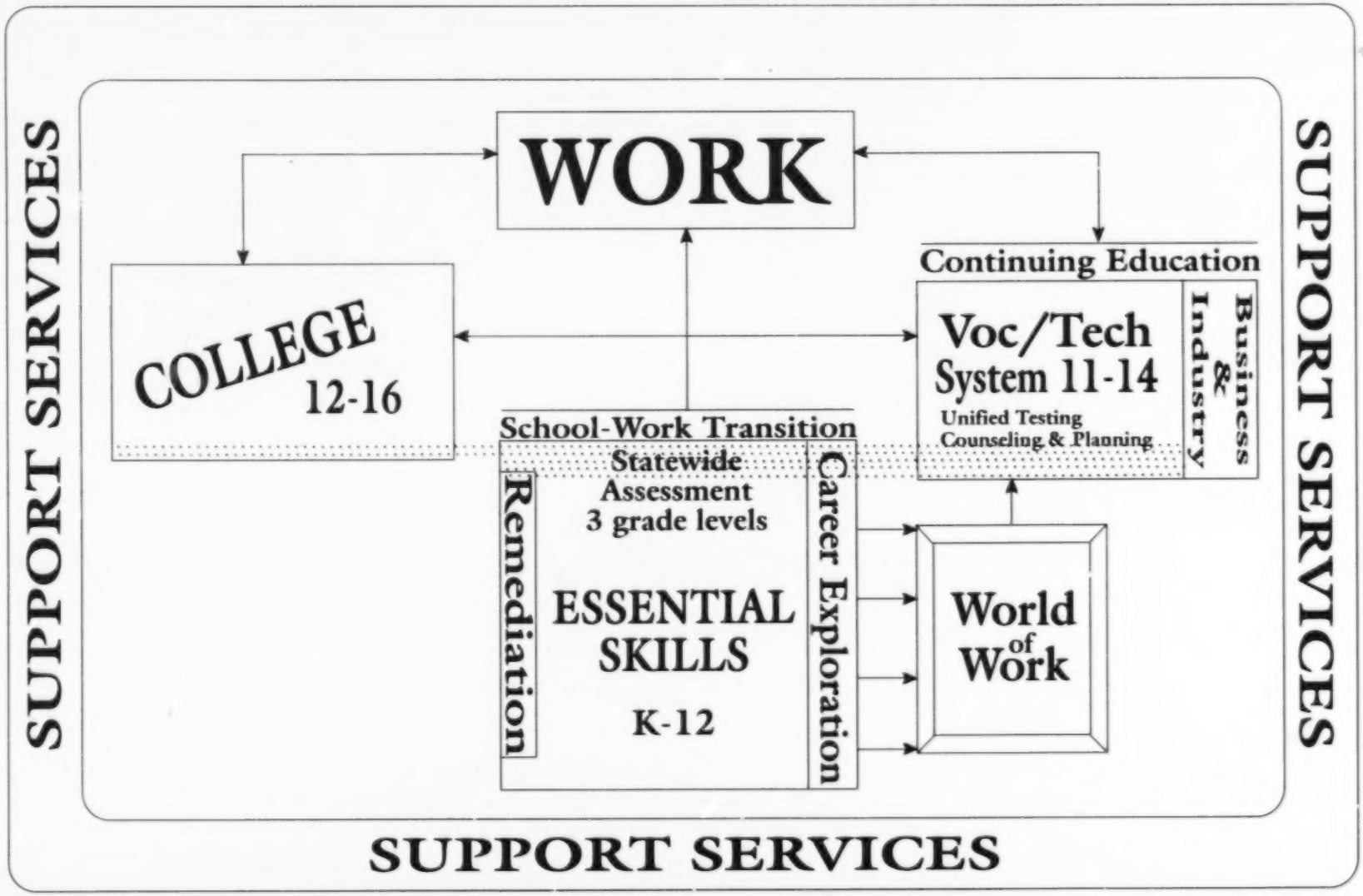


Diagram shows the relationship of the elements in the
Work-Oriented Education System the Commission recommends.

Target 2000

Mandate For the Commission

On Sept. 9, 1988, Gov. Madeleine M. Kunin issued Executive Order 67, creating the Getting Ready to Work Study Commission. In announcing the appointments to the Commission she said:

> "We need to address the issues of education, job preparation and the state's continuing economic development head-on and shape a system to meet tomorrow's needs. While the members of the Commission represent a broad spectrum of viewpoints and expertise, they share a commitment to providing our young people with the tools to enter tomorrow's workforce."

The workplace of the twenty-first century will be an exciting and demanding environment for the young Vermonters of today. The expectation is that they will be equipped to make the most of the opportunities it will offer, but there is evidence that many of our children will not be prepared.

The current products of Vermont's education system, according to business leaders, are not meeting the standards of today's workplace and will not be able to adapt to the more sophisticated jobs of the next century. The message is clear: Significant and wide-scale change is necessary to prepare Vermonters for the work environment of the year 2000.

The workers of the next century will need to be more verbally competent, more scientifically and technologically literate, more capable of critical reasoning and more adaptable than we are now preparing our youngsters to be. In order to compete and thrive, Vermont's businesses need people with these skills. Without a new and very specific vision of how to prepare our students to match up with industry's needs, this state might be heading for second-tier economic status and an era of diminishing opportunity for its citizens.

The need, and the Commission's vision, is to ensure that Vermonters have every possible chance to develop the skills for lifelong learning. That means an education system designed specifically to assure that our children will be ready to work when their turn comes.

This is a concept document rather than a finished plan, a broad design for a system of job-oriented education and training. It addresses the elements of the system: general education, technical education, transition from school to work and retraining. It will also touch on the critical issue of the support services that are necessary for some students to make a successful passage through the training system to the workplace. The chart on the previous page, titled Work-Oriented Education System, represents the Commission's conclusions about how the components should be related.

Methodology

To produce its design, the Getting Ready to Work Study Commission has engaged in a process of creative effort lasting several months. It divided into three working teams, each of which drafted a plan for an integrated education system.

After a period of research, meetings and consultation, a two-day retreat was held in May and the teams presented their proposals. The best elements were drawn from each plan, then refined and combined into an integrated framework. The details of the process are outlined in the section titled The Commission's Approach.

Target 2000

Premise For Change

What will Vermont's economy look like as the next century opens? What will the youngsters of today need to know to participate effectively in it?

A consensus has emerged that this country is at an economic crossroads and that our choices are stark. We can accept a declining standard of living and diminishing control of our own future if we trail in the competition with nations that stress preparation, productivity, quality. Or we can invest in the future by improving the quality of our workforce, which is where we lag badly.

Vermont's economy mirrors what has long been happening nationally and abroad: an evolution from heavy manufacturing to high technology production. Manufacturing remains a vital part of the economic mix, even as growth in the service sector accelerates. The leading edge of the Vermont economy is increasingly its "knowledge-intensive" sector.

The state's economy as a whole displays an increasing polarization of job opportunities between those that are technically sophisticated, knowledge-based and financially rewarding on the one hand, and those that require limited training and offer little or no growth potential on the other.

A Changing Future

The characteristics of the projected labor picture offer some insights into what the future will be like:

- A slowing growth rate in the labor supply
- A shrinking pool of young labor force entrants
- An overall aging of the workforce
- More participation by women and minorities

The labor force will grow in the next five years by roughly one percent a year, a third of the rate of 1975 to 1980. The number of workers from 16 to 24 will decline nationally and in Vermont between now and 1995, increasing slightly at the turn of the century. As younger people become a smaller share of the labor force, middle-aged workers will become more prominent. In 1985, according to the U.S. Bureau of Labor Statistics, 38 percent of all workers were between 35 and 54 years old; in 2000 this age group will account for more than half the workforce.[1] Hard data is not available at the state level to confirm conformance with those trends, but there is ample reason to suppose that we do not differ significantly. In a real sense, therefore, the quality and availability of education and training is as important to those Vermonters already working as to those still in grade school.

For Vermont employers, as for those throughout the country, the tightness of the labor market is aggravated by a perceived lack of quality in the available job candidates. Business leaders around the state say prospective employees lack essential proficiency in mathematics, language, communication, teamwork and decision-making skills. And Vermonters already in the workforce lack the skills they will need to compete effectively for jobs in the economy of January 1, 2000. The following cases involve national companies, but the problems they illustrate are pervasive:

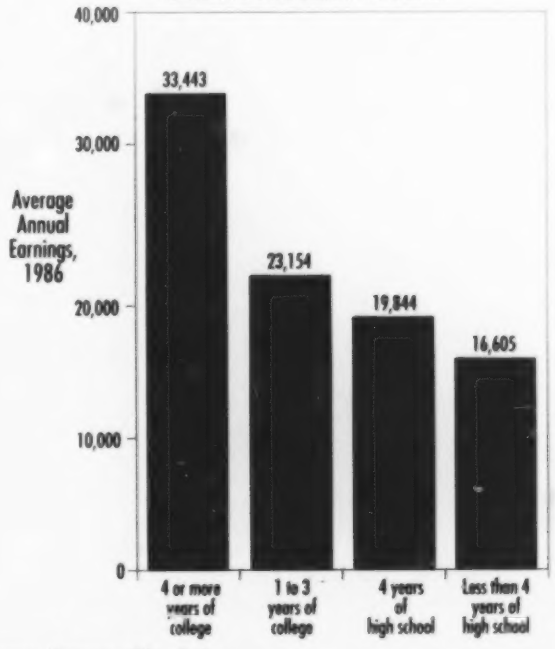
- New York Telephone Co. reports that only 20 percent of those taking an operator's test pass.

[1] Thomas Plewes, Associate Commissioner, U.S. Department of Labor; in speech to Vermont Dept. of Employment and Training.

- A Minneapolis advertising agency says most applicants are below the company's minimum standards in reading and writing: only one in 20 applicants for secretarial work is qualified, and one in 10 for supply and mail clerk positions.
- Motorola reports only 20 percent of overall job applicants can pass a simple seventh-grade English test or a fifth-grade mathematics test.
- Michigan Bell finds that just two of every 15 applicants for clerical jobs can pass all the writing and typing tests.[2]

There is, unfortunately, no reason to suspect that the Vermont labor pool differs markedly from the rest of the country in terms of being qualified for challenging jobs. Vermont business executives have made clear that they are routinely disappointed by the lack of essential job skills they encounter in applicants. Their comments provide only anecdotal evidence of the situation here, but indicate that Vermont does, indeed, track with national trends in this area.

Education Pays



Source: Bureau of Statistics

Vermonters entering the workforce and those already working are going to be in high demand, but not indiscriminately. Businesses need more than warm bodies, they need job-literate, well-trained (or trainable) productive employees. But the gap between what workers can do and what jobs and employers demand is at crisis width and growing. One grim estimate of the severity of the situation nationally is that 90 percent of those 21 to 24 years old do not have the skills that will be needed for three-fourths of the jobs that will become available by the turn of the century.[3]

The linkage between job opportunity and skills is direct and inescapable. Better education virtually always leads to better pay, better access to wider opportunity, better adaptability in a changing economic environment.

A look at the leading sectors of today's economy enables us to determine what the next century's workplace will require and reward:

- A higher level of basic mathematical proficiency than is now routine.
- A useful grasp of symbolic operations.
- The ability to think conceptually and reason critically.

[2] Excerpted from *Building a Quality Workforce*, prepared by the U.S. departments of Labor, Education and Commerce.

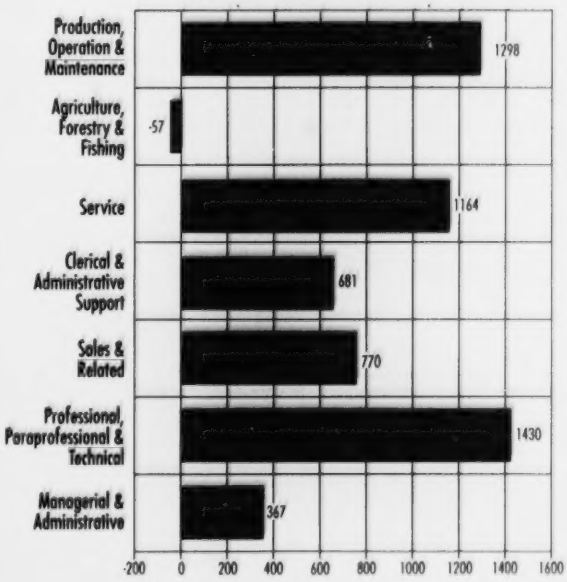
[3] *Workforce 2000 – Work and Workers for the 21st Century*, p. 51.

- Better reading ability, with demonstrated comprehension, than is common today.
- An understanding of science and technology.
- Strong communication skills.
- Flexibility and adaptability; that is, the ability to learn.

In the past, the economy offered the relatively unskilled worker an opportunity to move into a good job with the hope of advancement. That option is decreasing steadily in this state and the country as a whole as the world economy shifts gears. In the new order, mobility on the job ladder is almost always determined by education and training.

Anticipated Job Growth

Vermont 1984-1995
(Total = 5653)



Source: Occupational Employment Projections for Vermont

All 20 of the fastest-growing occupations between now and the end of the century are in the service area. Twelve are in the health field and six are technology-related. The other two are employment agency interviewers and paralegals. In Vermont, four out of five new jobs that will open in the next 10 years will be service-based: finance, insurance, real estate, health, education, computers.

Indicative of the changing needs of employers, more than 25 percent of Vermont's new jobs over the next five years are expected to be in professional, paraprofessional and technical fields. Even in the computer industry and related fields the emphasis will shift from pure production to research and development, reflecting a general move toward a workplace that requires higher skill levels.

Those who lack the skills will almost certainly be locked out of the technically demanding, higher-salaried, secure jobs of the future. Knowing how to learn new techniques and acquire new skills will very likely be decisive, enabling workers to function well in an economy that will require frequent retraining.

Vermont must do a thorough job of preparing its young people for the opportunities the economy will offer them in a scant 10 years. But just as important, it must provide pathways for those already in the workforce to update their skills. The Commission's consensus is that we do not do so now and cannot do so in the current configuration of the delivery system.

A Dated Model

Identifying the skills the workforce of the future will need is easy. Deciding how to provide them is not. We do not have a new model for vocational/technical education, so we invest heavily in a dated model of education and job training and continue to send students through it. Vermont needs a strategy to guide long-term investment in work-related education, for those already in the workforce as well as for the youngsters in the pipeline.

Fortunately, we are not starting from ground zero. Vermont has made a significant investment in physical and intellectual resources for vocational-technical education and training at the secondary and the post-secondary levels. And we have some unique advantages as a state:

- The vocational-technical education community and Vermont business have a history of working together.
- Vermonters have access to on-the-job training opportunities through a statewide network.
- Vermonters have already studied many aspects of vocational and technical education during the 1980s. Among the contributors have been the Higher Education Planning Commission, the directors of the 16 area vocational centers, the Job Skills Cabinet, the State Council on Vocational Education, the Consolidated Council on Employment and Training and many others. These studies have provided part of the foundation for developing a new job-oriented education and training system.
- Vermont has already shown that it can make joint ventures between higher and secondary education work at the state and local levels.
- State government has shown that it can solve complex problems through joint initiatives among state agencies.
- Finally, and perhaps tellingly, Vermont is small enough to be able to think out its future and to put good ideas into practice.

The students need the skills and the business community needs competent workers. Matching them is the goal of any work-oriented education system. We can no longer afford to train for a narrow range of jobs. Training and educating for lifetime learning is essential.

Vermont's students should be able to look to the future with confidence. Those who do not seek four years of college should expect to find rich choices in the world of work or to explore further technical education. The state's responsibility is to provide the foundation for that to happen, whether the student is a highly motivated, computer literate fifth-grader or an underachiever with emotional problems, a learning disability and no idea of what to do when she has to go out looking for a job.

Those already in the Vermont workforce also have legitimate expectations that the system must satisfy. The labor pool is growing slowly, but changes in workplace demands will happen faster and more frequently. So retraining, and thus the adaptability and flexibility of current workers, will take on increasing importance. Businesses will seek out those who have widely applicable skills and the ability to accommodate to changing conditions and opportunities.

Small businesses with limited resources provide a large percentage of jobs in Vermont, so the

training and retraining that will be needed will not always be able to come from that sector. Equally, the education system cannot be expected to keep pace with developments in all important fields. So the two sectors, public and private, must be prepared to assist one another where possible.

Non-traditional populations of competent workers must be served as well: the under-educated unemployed, single parents entering or re-entering the workforce, or those with disabilities who want to work. The system must permit them easy entry for remediation or retraining and simplify the process of getting them ready to work. It must account for their aspirations and make it possible for them to acquire the skills to participate in the economy.

All these expectations must be met within a framework of cooperation if the effort is to use resources effectively. The cooperators are the education network, business, state government and the public.

- The schools should develop a building-block approach to education and training, to ensure that learning, step by step, is based on solid foundations. In addition, agreements should be articulated among education institutions to accept credits, experience and other proofs of competency more freely, breaching artificial barriers.
- The business community must be involved in a partnership with the education system and be invited to share in preparing youngsters for the workplace. The private sector should provide training opportunities and personnel to the schools, where appropriate, and be willing to participate actively in other ways. It should share with teachers and their students information about emerging technologies, processes, trends and techniques. Businesses should encourage their employees to be active in the education and training process and should provide opportunities for parents in particular to participate in their children's education.
- Public officials must recognize that some programs can operate more effectively by moving them out of state agencies and into an integrated, perhaps even unified, vocational/technical education system. If the goal is comprehensive work-oriented education, the focus must be on how best to serve the needs of the client population rather than retaining control of programs.
- The system should be structured and operated to encourage parents and others in the community to participate actively in education and training.

Target 2000

The K-12 System

Providing the Skills

The primary responsibility of the K-12 system is to enable all students to master the essential skills that form the basis for productive work and future learning. Broadly speaking, they are:

- Communication
- Critical Thinking and Problem-Solving
- Mathematics
- Science and Technology
- History and Culture
- Economics and Citizenship
- Personal Development
- Career Development

Recommendations

To encourage success in teaching and acquiring the essential skills, the Commission recommends that the system:

- **Eliminate the discredited "general track" curriculum, so no student gets an unfocused, second-rate education — essentially a ticket to nowhere.**
- **Provide education and training all year in sessions of eight to 12 weeks that can be combined to fit student needs. (Students should not fall a whole year behind before someone notices and takes care of the problem; and those who need training should not have to wait a year to enroll.)**
- **Set challenging goals to ensure that Vermonters meet world-class levels of skill and knowledge.**
- **Establish routine statewide assessment of essential skills mastery in the elementary, middle and high school grades.**
- **Ensure that a diploma is proof that a student has mastered the essential skills and indicates an actual level of achievement.**
- **Provide incentives to students and educators to excel.**
- **Offer a rich curriculum and evaluate it continually for relevance and challenge.**
- **Encourage creative, innovative teaching techniques to reduce reliance on the textbook, the lecture and the chalkboard.**

In addition, the Commission recommends that:

- **School structure be responsive to differences in the developmental stages and learning styles of the students in elementary, middle and high schools.**
- **Local boards, the Professional Standards Board, and the education community generally continually develop the professional skill and knowledge of teachers and create opportunities for involving them in decisions that influence student achievement.**

Essential Skills

The workplace of 2000 will demand skills ranging from the technical and job-specific to those that involve teamwork and the ability to make intelligent decisions. Knowing how to learn will be the key element in increasing productivity and ensuring personal growth. Workers at all levels will be expected to apply new information and techniques quickly and effectively.

Target 2000

Recommendations

Vermont youngsters must have the foundation to operate in the workplace. **The Commission therefore recommends that mastery of the following essential skills be demonstrated as a prerequisite to completion of the kindergarten-through-high-school program, and that students statewide be evaluated in these areas, by testing at regular checkpoints in the elementary, middle and high-school levels:**

Reading

- Understand the purpose of written material
- Select reading process by type of material
- Summarize main and subsidiary ideas
- Locate specific facts and details
- Differentiate fact from inference
- Follow written instructions
- Interpret information in charts and tables

Writing

- Use standard English
- Write clearly and legibly
- Apply the rules of grammar, spelling and punctuation
- Take notes and develop outlines
- Organize information into logical paragraphs
- Compose letters, reports and memoranda
- Proofread and edit written material
- Locate sources of information
- Reference sources correctly

Speaking

- Use standard English
- Explain ideas and opinions
- Ask questions to obtain and verify information
- Answer questions accurately
- Give clear directions and instructions
- Organize and present information to groups
- Interact effectively in group discussion

Listening

- Understand and follow directions
- Attend to content, context and emotions
- Ask questions to clarify meaning and intent
- Listen in order to provide feedback
- Restate ideas and feelings expressed by others
- Understand the relationship between values and what we "hear" people say

Critical Thinking, Problem-Solving

- Define the problem or question
- Break down the problem into its essential parts
- Propose solutions without imposing judgment
- Use intuition to discover new ideas
- Use systematic approaches to solving problems
- Establish criteria to evaluate courses of action
- Plan for implementation of proposed solutions

- Persist when solutions are not readily apparent
- Innovate beyond stated outcomes

Mathematics
- Add, subtract, multiply and divide (whole numbers, fractions, decimals)
- Use mental processes, paper/pencil, and calculating devices
- Measure using standard and metric systems
- Depict relationships using tables, charts, and graphs
- Apply the principles of algebra and geometry
- Create and use simple statistics and probability
- Solve ratio, proportion, and multiple step problems
- Estimate outcomes

Science and Technology
- Observe, classify, predict, measure, interpret and hypothesize
- Know basic biology (living systems, genetics, nutrition, disease)
- Apply principles of chemistry and physics to everyday problems
- Understand environmental issues and the impact of technology
- Understand the relationship between science and technology
- Develop manual/perceptual skills to master the "tools" of work
- Extract information through communications systems
- Use computers for managing information, word processing, simple programming

Economics and Citizenship
- Describe the key elements of the American economic system
- Understand basic economic issues confronting all societies
- Apply economic principles to managing personal finances
- Understand entrepreneurial approaches to business
- Know the principles of a democratic society
- Fulfill the responsibilities of citizenship

History and Culture
- Know American and world history
- Understand our own and other cultures in terms of history, geography, politics, the arts, law and religion
- Interpret the impact of major events on American values, beliefs and ideologies
- Describe the primary social, economic and political systems of the world
- Use maps and globes to locate places
- Speak and write using a second language

Personal Development
- Know strengths and weaknesses
- Take responsibility for beliefs and behavior

- Develop and maintain a healthy self-image
- Act with integrity, honesty and respect
- Work independently and show initiative
- Negotiate differences of opinion and resolve conflict
- Offer and accept criticism
- Show tact and understanding in relating to others
- Demonstrate positive attitude and pride in work

Career Development

- Articulate aptitudes, interests, and abilities
- Set occupational and career goals
- Develop and follow a career path
- Research career options and potential employers
- Prepare resume, letters of inquiry, job applications
- Understand job tasks and technology of desired position(s)
- Know how to dress appropriately for interviews and workplace
- Continue education and training after employment

The importance of the essential skills was highlighted in an extensive study conducted by researchers from the federal Departments of Labor, Commerce and Education.[4] Their interviews with business leaders and personnel executives revealed widespread concern that job applicants lack critical foundation skills. They noted especially the need for, and general scarcity of, employees who can:

- Read and comprehend policy and instruction manuals as well as technical material.
- Write sentences with correct form, spelling, punctuation, and other matters of mechanics.
- Perceive errors and rewrite.
- Speak and explain ideas clearly.
- Answer and ask questions and follow verbal directions.
- Add, subtract, multiply and divide.
- Work with fractions and decimals.
- Measure and comprehend spatial relationships and use metric measurements.
- Type with accuracy and speed.
- Work accurately with computers and computerized programs.
- Learn, be flexible, and respond to change quickly.
- Deal with complexity; that is, learn and perform multiple tasks and analyze and deal with a wide variety of options.
- Identify problems, perceive alternative approaches and select the best approach.
- Operate independently after an initial training period.
- Work cooperatively with people of different personalities, race, sex, across different authority levels and organizational divisions.

[4] "Business' Challenge to Education," in *Building a Quality Workforce*, prepared by the U.S. Departments of Labor, Education and Commerce.

- Be punctual and dependable; show pride and enthusiasm in performing well.

The relationship between the essential skills mastery the Commission recommends and the competencies the business sector values is evident.

Remediation

Not all who enter the system make it through smoothly. But if the diploma is to have meaning in the world of work, it must indicate the mastery of essential skills and it must be earned. It is the responsibility of the system to provide remediation to those who need it, so children, youth and adults alike can acquire, develop or refresh those essential skills.

Recommendations

The Commission recommends that the K-12 component be responsible for remedial education. In carrying out this responsibility, the schools should:

- **Monitor student performance to identify quickly those who need help.**
- **Provide individualized, flexible, timely instruction to help students master the missing skills and not give them diplomas just to move them through the pipeline.**
- **Give every learner, adults as well as schoolchildren, equal and easy access to appropriate remedial education.**
- **Make the remediation process fast-paced and short-term, when possible.**

Support Services

Many students need more than routine family support and teacher encouragement to succeed or even persist in school. Unfortunately, schools have neither the personnel nor the resources to identify and address those problems. Help is often either too distant or too time-consuming for students and families to seek out.

Recommendations

To assure that the non-education needs of students are promptly and appropriately addressed, the Commission recommends that:

- **Health services, nutrition education, family counseling and other kinds of support services are coordinated and available in or near schools for all students who need them.**
- **The Agency of Human Services provide training for school personnel in public prevention and treatment services available and that school staff train AHS personnel in accepted education practices.**
- **AHS provide schools with access to an Automated Information and Referral Service, to alert schools to private as well as public support service resources for children and families.**
- **AHS regional coordinators provide and coordinate needed non-education services.**

Career Exploration

All students should have a realistic knowledge and experience of work and careers before making important school and job decisions. That may mean summer jobs or part-time work after school; attending job fairs; participating in field trips to workplaces; participation in school-sponsored career exploration and other programs and activities. Students should know what aptitudes, skills and effort certain careers are likely to require.

Recommendations

To assure that students are aware of the choices available to them and the qualifications for that work, the Commission recommends that:

- **Schools provide organized career exploration.**
- **Guidance programs and career planning services be improved to provide students with up-to-date information on career opportunities.**
- **The private sector assume a greater role in providing opportunities for students to learn about specific types of work. Career days, open houses and familiarization visits to schools should be routine as bridges to students. Businesses should encourage employees to work as mentors with youth.**

School-to-Work Transition

For a student bound for higher education and a professional degree the education system provides a system of ladders from school to career. But most Vermont youngsters step off the education ladder long before the level of a professional career, with nowhere to step next. They are virtually alone as they look for work.

The move from the last day of high school classes to the first day at work can be a stunning recognition of the unwelcome reality that "This is how it's going to be." It has been clear for a long time that many students need help with the transition to the workplace, but addressing the need has not been a priority. It should be.

Recommendations

The Commission recommends that at a minimum schools provide basic information on the essentials of the world of work: how to dress for interviews, fill out applications, ask for references, and use proper forms of address.

Those skills might appear too basic to warrant formal attention, but their importance is striking: One Colorado study found that 60 percent of the young people applying for jobs were rejected "...because of deficiencies in the application/interview process."

The Commission also recommends that more emphasis be placed on monitored work experience.

Introducing students to work situations in which the school is a partner is one way of providing them with a clear understanding of what the workplace requires. Successful models include:

- Cooperative education
- Apprenticeships
- Internships
- Pre-employment training
- Youth-operated enterprises

These programs have the advantage of exposing youngsters to adult supervision in a work setting and providing them with the opportunity to relate their classroom learning to the workplace.

For example, youngsters in the cooperative education program move into the workplace part time during high school and receive training, experience and school credit as well as wages for their hours on the job. Typically, a co-op student has already focused on an area of interest and frequently stays with the cooperating company after graduation. This program deserves more attention from educators and more support from the business community.

The Department of Employment and Training operates a Youth Work Experience Program, which places disadvantaged youngsters in summer jobs, a valuable transition experience.

The Commission recommends more overall attention to the transition process, including counseling, planning and significantly more contact on the issue between schools and the business community.

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Target 2000

Vocational/Technical Education

The Delivery System

The Commission envisions an integrated, work-oriented education system. The system must provide Vermonters access to education and training programs that prepare them for life-long learning as well as immediate employment. By blending applied academics with skill training, it must prepare both youth and adults for the necessity of continued retraining. The system must be responsive to the needs of the business community through tailored training programs and focus on core technical skills that are transferable to specific jobs.

No structure or delivery system is in place that has the specific responsibility of preparing students for the workplace. In fact, business leaders around the state continually point out that Vermont youngsters increasingly lack the essential skills their companies need.

The elements of a comprehensive, work-oriented education system are scattered throughout the public sector. The Commission believes those efforts must be integrated for the system to operate efficiently, economically and effectively. How that is to be achieved will be the subject of public debate and discussion during the implementation phase of the Commission's work. The components of the system are:

- High school career education programs
- The 16 area vocational/technical centers
- Vermont Department of Employment and Training education programs under the U.S. Job Training Partnership Act and other federal programs
- Vermont Department of Labor and Industry apprenticeship programs
- Vermont Department of Education adult training and retraining programs
- Vermont Agency of Development and Community Affairs job training programs
- Vermont Student Assistance Corp. outreach programs
- Vermont Technical College and elements of Community College of Vermont
- Customized training programs for business and industry

Recommendations

The Commission recommends the following specific design elements for the system:

- **A strong focus on students and their real needs.**
- **Open entry and exit, making it convenient and inviting for clients at any level of the system to enter at several times of the academic year.**
- **Flexible, customized service geared to providing each student with a personal career plan.**
- **An orientation receptive to goal changes by students.**
- **Educational diversity.**
- **Consistency with and linkage to Vermont's economic development policy.**
- **Emphasis on both pre-service and continuing education.**

- **Cooperative, flexible arrangements among programs and institutions to accept one another's credits through articulation agreements.**
- **Efficient allocation of resources.**

The over-arching design philosophy is that all efforts be cooperative and that they address both the immediate and long-term needs of Vermont, its business community and its citizens.

The Commission recommends integrating all training, retraining and education efforts now based in state agencies into a new, work-oriented education system.

Plans have not been produced to cover all programs, but designs have been discussed. The apprenticeship programs in plumbing, electricity and other building trades now administered by the Vermont Department of Labor and Industry, for instance, could be moved into the comprehensive system and modified, where necessary, to reflect their relationship to the other elements. Competency-based training would be emphasized rather than time in grade, and related instruction classes would be improved. The operation of other agency-resident state programs could also be adjusted to take advantage of cooperative opportunities and to provide clients with the necessary training and associated services.

Business and Public Participation

A key element of the proposed system is strong, meaningful involvement by local communities, business and industry. The form that public involvement will take must await the implementation phase of this process, but could include membership on local program advisory committees, direct participation in curriculum development or mentor roles in career education and exploration programs, among other options.

Business involvement in the education process must be direct and ongoing.

Recommendations

The Commission recommends that the private sector demonstrate a commitment to technical education by:

- **Increasing its presence in the schools, working with teachers and administrators and interacting with students.**
- **Showing through hiring and promotion practices that academic achievements will be rewarded.**
- **Providing technical educators with the information, staff expertise, equipment and teaching aids necessary to develop and keep current course content and instructional methods.**

Lifetime Learning

It is essential as a practical matter that students be prepared not only to enter the workforce, but to adapt to changes in the workplace. Flexibility in the system's products as well as in the system itself is a primary goal.

Recommendations

The Commission recommends that all education and training provided under the new system focus on the principle of applied learning. Programs should integrate essential skills — such

as proficiency in mathematics, science, reading, writing — with job-oriented technical programs.

The system should teach students how to learn as it teaches them how to read and write. Applied learning techniques involve students in the education process as the relevance of related subjects becomes clear.

The Need for Expert Advice

Getting assistance from the system in career planning, further education and training or other options should not involve red tape, tracking down guidance counselors, extraordinary effort or frustration at any level, especially at entry points.

Recommendations

The Commission recommends the development of a Unified Testing, Counseling and Planning Service, a network of "one-stop" offices statewide that can provide all services or service referrals for testing, job training, career planning, retraining or remedial classroom work. This service must have the capability to:

- **Identify individual skills and deficiencies through testing, interviewing and other methods.**
- **Counsel students and produce individualized education and employment plans.**

Secondary Vocational Enrollments: FY 83 to FY 89

	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
TOTAL ENROLLMENT	6515	5122	5000	5126	4888	4471	3935
% of 11th and 12th	50%	41%	40%	41%	39%	35%	31%
SPECIAL NEEDS:							
% Handicapped	NA	NA	NA	10%	10%	12%	14%
% Disadvantaged	NA	NA	NA	24%	21%	21%	30%
COST/STUDENT	2613	2802	3083	3539	3933	4419	4839

Report Definitions:

Total Enrollment :	The number of secondary vocational students; this does not include adults in vocational programs or students in pre-vocational programs
% of 11th & 12th:	The number of vocational students divided by the total number of 11th and 12th graders enrolled in public schools that year.
Special Needs:	The precentages of vocational enrollments who were handicapped or disadvantaged. During FY 83 through FY 85, special needs counts were not reported.
Cost/Student:	The average of the centers' announced tuition for each year.

- **Inventory education and training opportunities.**
- **Arrange for appropriate support services (i.e. child care, transportation, stipends, tuition support).**
- **Refer clients to appropriate service providers.**

The single-stop system should remove the mystique of career education, especially for those wary of a system that might have failed them once already. It would provide clearly identified, immediate service to Vermonters, eliminating one of the major disincentives to re-entering the education/training system: inconvenience. There is no reason any Vermonter should be shunted from one state office to another for the kind of testing, counseling and support services she needs to upgrade her work skills or train for a new career.

The Commission further recommends locating the testing/counseling offices at or near the vocational/technical centers to give clients easy access in a familiar setting, to enable providers to concentrate resources and to simplify procedures for clients and providers alike.

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Target 2000

A Closing Word

Vermonters have long been known for their hard work, independence, thrift and competitive spirit. They also have a long tradition of educational excellence. The evolution of the global economy has brought the challenge of competition to these mountains in ways that could hardly have been foreseen as recently as ten years ago. Our competitors are sometimes our neighbors and sometimes countries halfway around the world. Things have changed.

The elements of the education and training network we have today were designed for a different time and a vastly different set of economic and social circumstances. The skills that will be needed to thrive in the workplace of the 1990s and beyond are far more refined than educators and business leaders of the 1950s could have guessed. They could not have conceived how profoundly the playing field would change. Not all the changes have been economic; students, family structure and the relationships people have with their employers have all changed, too. What worked well in the post-World War II era works less well now. It is, the Commission believes, time for a new model.

In preparing our children and updating the skills of current workers, we can neither spare resources nor waste them. The Commission's design concentrates and coordinates resources, indicates a clear new direction for a comprehensive system and provides a framework for involvement and accountability.

In the coming months Vermonters will be asked to attend meetings around the state to help decide how changes can be made. The Commission members look forward to that public participation.

Target 2000

Appendix

The Commission's Approach

The Commission took a step-by-step approach to its task. It first reviewed the outlook for Vermont's economic future in the year 2000. Then it systematically went through a list of steps to produce its recommendations. Here are the steps:

1. Reviewed and refined the scenarios for Vermont's economic future in the year 2000:

- Examined existing and developing projections of Vermont's economic future. Consulted business leaders, including the Vermont Business Roundtable, government officials, the research community and economic planners.
- Reviewed demographic projections to develop a picture of Vermont's population in the year 2000.
- Selected scenario(s) around which an educational strategy might be designed.
- Examined data concerning programs, costs, results and linkages among the parts of a job-oriented education system.

2. Defined what Vermonters will need to know and be able to do for tomorrow's jobs.

- Determined the broad groups of skills required for functioning in the economic future we anticipate.
- Reviewed data on the jobs that will be available and the skills that will be required.
- Investigated surveys, special studies and background papers to validate the scenario.

3. Prepared a design for the academic, vocational and technical training capacity needed to provide Vermonters with those skills.

- Described the academic, vocational and technical capacity needed to provide the skills.
- Developed alternative training and retraining structures, based on the above analysis and reviews of the major alternatives in other nations and states.
- Examined recent Vermont studies of vocational and technical education.
- Determined the educational capacity Vermont requires in the public schools at the post-secondary level and for lifetime training.

4. Compared the education and job training capacity that we have to this design.

After the Report

The next step for the Getting Ready to Work Study Commission will be to design an implementation plan to ensure that Vermont has the job-oriented educational capacity it requires. The basic questions are already in place:

- What new investments will be required?
- What current investments should be redirected?
- What elements of the current model can be preserved?
- What elements must be eliminated?
- When must we act?
- What are the barriers to success?
  - overlapping jurisdictions?
  - fragmented delivery systems?
- How can Vermont make this happen?

Target 2000

Selected References

American Society for Training and Development and U.S. Department of Labor, Employment and Training Administration, *Workplace Basics: The Skills Employers Want*, 1988

Business Council for Effective Literacy, No. 16, "BCEL Editorial" McGraw, Harold W. Jr., July, 1988

Business Week, Cover Story, "Help Wanted," August 10, 1987

Business Week, Special Report. "Needed: Human Capital" September 19, 1988

Colorado State Board for Community Colleges, *A Vision of the Future*, January, 1987

Congress of the United States Joint Economic Committee, *Summary of Hearings on the Quality of the American Workforce*, Tucker, Marc (ed.)

Economic Outlook Conference, *New England Economic Project Review*, Boston, MA, November 16, 1988

Harvard University, "Education and the Next Economy," Reich, Robert B., April, 1988

Hudson Institute, *Workforce 2000 Work and Workers for the 21st Century*, Johnston, William B. (ed.), Indianapolis, Indiana, 1987

Idaho State Division of Vocational Education, *Tomorrow's Workforce: The Future of Vocational Education in Idaho*, June, 1987

Intergovernmental Advisory Council on Education, *A Report to the President of the United States*, Washington, D.C., 1987

Jobs for Connecticut's Future, Executive Report, January, 1987

Michigan State Board of Education, *Goals 2000: Deliver the Dream*, November, 1988

National Academy of Sciences National Research Council, *High Schools and the Changing Workplace*, Washington, D.C., 1984

National Alliance of Business, *A Critical Message for Every American Who Plans To Work or Do Business In the 21st Century*, Washington D.C., 1986

National Council of Supervisors of Mathematics, "Essential Mathematics for the 21st Century" Minneapolis, MN, 1988

The National Governors' Association, *Trip to Federal Republic of Germany and Denmark*, October, 1984

Ohio Council on Vocational Education, *Teaching Higher Order Thinking Skills: Implications for Vocational-Technical Education*, 1988

Scientific American, "A Surge in Inequality," Thurow, Lester C., pp. 30 - 37, May, 1987

U.S. Department of Labor, *Building a Quality Workforce*, Washington, D.C., 1988

U.S. Departments of Labor, Education and Commerce, *Business Challenge To Education: The Skills Gap*, Washington, D.C.

Vermont Business Roundtable, *Population and Employment Forecast*, 1988

Vermont Department of Education, "Framework for the Development of a Science, Scope and Sequence," 1988

Vermont Department of Employment and Training, *Heading for the Future: Occupational Employment Projections for Vermont to 1995*

Vermont Department of Employment and Training, "Outlining the Problem," *The Governor's Symposium on Expanding the Workforce*, November 16, 1987

Vermont Department of Employment and Training (Policy and Information), *1988 Annual Planning Information*

Vermont Department of Employment and Training (Policy and Information), *Vermont and the Nation: Trends and Shifts in the Workforce and Employment*, November, 1988

Vermont Official Statement, *General Obligation Bonds, 1988 Series A*, September, 1988

The Wall Street Journal, "A Shallow Labor Pool Spurs Business to Act to Bolster Education," Simpson, Janice C., September 28, 1987

The Washington Post, "Retooling the American Workforce," Packer, Arnold, Special Edition, July 10, 1988

Western Governors' Association, *Human Capital Investment for State Economic Development: A Case Study of a State Government "Portfolio,"* July, 1988

Western Governors' Association, *Occupational Education, Economic Competitiveness, and the West*, June, 1988

The William T. Grant Foundation Commission on Work, Family and Citizenship, *The Forgotten Half: Non-College Bound Youth in America*, Washington, D.C., January, 1988

The William T. Grant Foundation Commission on Work, Family and Citizenship, *Youth Policies and Programs in Selected Countries*, Washington, D.C., August, 1987

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GATEWAYS IN THE SYSTEM

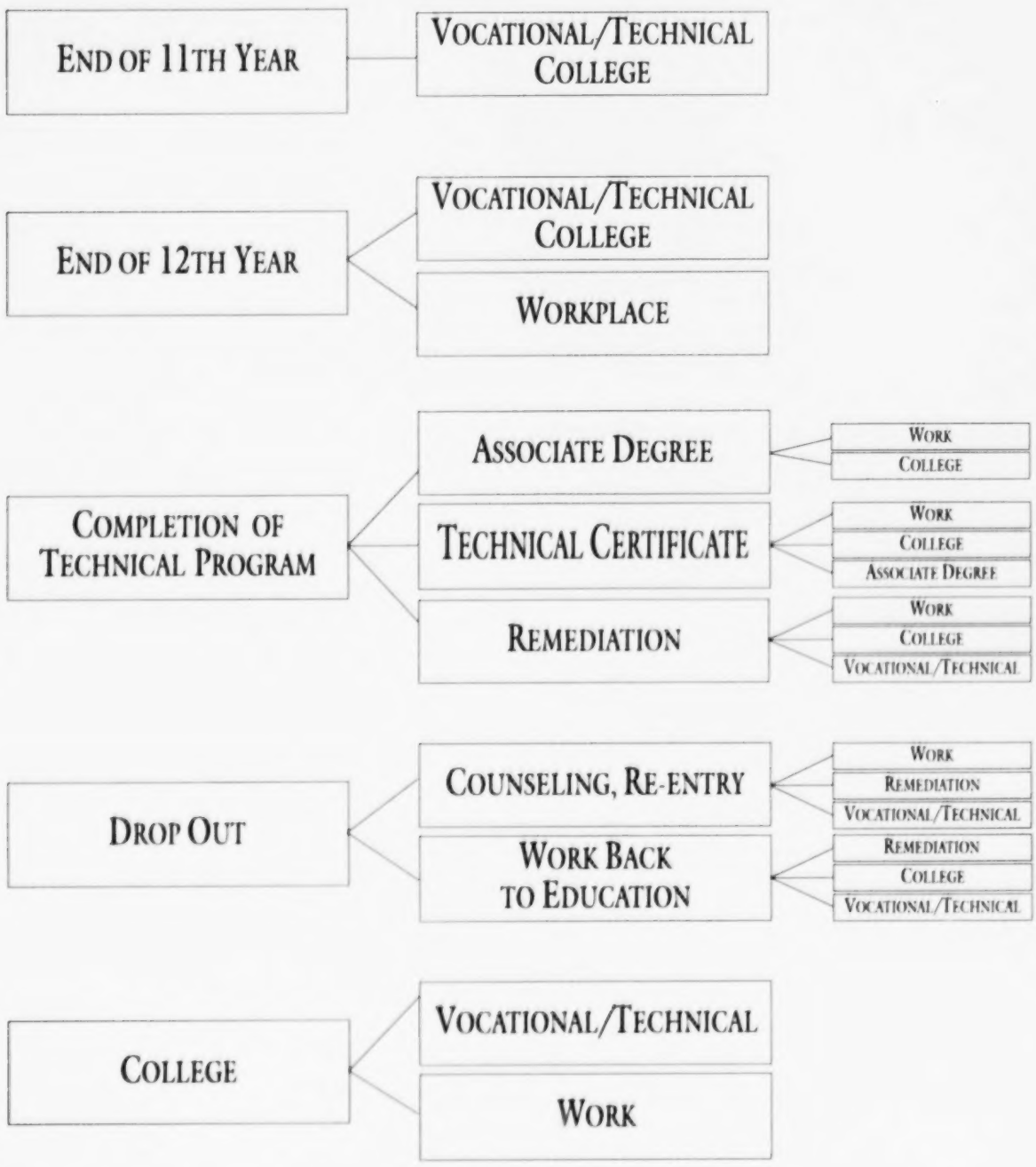

Diagram shows the entry points to the system and the pathways open to reach education, training and career goals.